

PROCESS AND APPARATUS FOR ACHIEVING PRECISION TEMPERATURE CONTROL

ABSTRACT OF THE DISCLOSURE

5 An apparatus providing effective control of fluid temperature to achieve temperature control precision of $\pm 0.1^{\circ}\text{F}$ at flow rates exceeding 5 gallons/minute includes a hot and a cold reservoir of process fluid maintained at their desired temperatures by a high-accuracy industrial chiller and an industrial heater, respectively. A three-way control valve mixes fluid from the reservoirs to produce a precisely controlled stream of process fluid delivered to the point of usage. Another flow control valve maintains system flow at a precise value.